

What is claimed is:

1. A vehicle power supply system comprising:

a battery;

an inverter unit for converting DC electric power of the battery into AC electric power and supplying it to a rotating electric machine to drive it;

an AC wiring line for connecting the rotating electric machine and the inverter unit; and

a DC wiring line for connecting the inverter unit and the battery,

wherein the inverter unit is placed in a vicinity of the battery so that the DC wiring line becomes shorter than the AC wiring line.

2. A vehicle power supply system comprising:

a battery;

an inverter unit for converting DC electric power of the battery into AC electric power and supplying it to a rotating electric machine to drive it;

an AC wiring line for connecting the rotating electric machine and the inverter unit; and

a DC wiring line for connecting the inverter unit and the battery,

wherein the inverter unit is placed in a vicinity of the battery by fixing the inverter unit to an attachment member

for mounting the battery to a vehicle main body.

3. A vehicle power supply system according to claim 1, wherein the inverter unit is integrally fixed to an upper end face of the battery.

4. A vehicle power supply system according to claim 2, wherein the inverter unit is integrally fixed to an upper end face of the battery.

5. A vehicle power supply system according to claim 1, wherein the inverter unit is integrally fixed to a side of the battery.

6. A vehicle power supply system according to claim 2, wherein the inverter unit is integrally fixed to a side of the battery.

7. A vehicle power supply system according to claim 2, wherein the inverter unit is fixed to a housing for holding the battery.

8. A vehicle power supply system according to claim 2, wherein a housing of the inverter unit has also a function of a housing for holding the battery.

9. A vehicle power supply system according to claim 1, wherein an electric connection body for electrically connecting the battery and the inverter unit is a metal plate.

10. A vehicle power supply system according to claim 2, wherein an electric connection body for electrically connecting the battery and the inverter unit is a metal plate.

11. A vehicle power supply system according to claim 9, wherein the inverter unit is held and fixed to the battery by the electric connection body for electrically connecting the battery and the inverter unit.

12. A vehicle power supply system according to claim 10, wherein the inverter unit is held and fixed to the battery by the electric connection body for electrically connecting the battery and the inverter unit.

13. A vehicle power supply system according to claim 2, wherein a housing for holding the battery is provided with a cooling function member.

14. A vehicle power supply system according to claim 13, wherein a cooling medium for cooling the battery is identical to a cooling medium for cooling the inverter unit.